4th Open Science Meeting of the Global Land Programme

April 24-26, 2019 | Bern, Switzerland

Conference Agenda

Overview and details of the sessions of this conference. Please select a date or location to show only sessions at that day or location. Please select a single session for detailed view (with abstracts and downloads if available).

Session Overview

Session

112RA: Sustainability impacts of large scale investments

Time: **Wednesday, 24/Apr/2019: 2:00pm - 3:30pm**
Session Chair: **Ward Anseeuw**
Session Chair: **Wegayehu Fitawek**
Session Chair: **Markus Giger**
Session Chair: **Christoph Oberlack**
Session Chair: **Julie Gwendolin Zaehringer**
Session Topics: What are the visions for the planetary land system?

Location: **UniS-A 022**
UniS Building, room A 022, ground floor, 72 seats

Session Abstract

If a consensus emerges regarding the necessity of additional investment into agriculture (FAO, 2010), it is less evident whether large-scale agricultural investments (LAI) are a vector for broader agrarian and socio-economic transformations in a sustainable manner (Borras et al. 2012, Deininger and Byerlee 2011; Collier and Dercon 2014). Despite a growing literature (World Bank, 2010; White et al., 2012, Cotula 2014 etc.), most assessments of LAI impacts tend to remain local, in the form of specific case-studies and are often short-term without broader contextualization (Fairhead et al., 2012). Efforts to overcome these limitations through different types of meta-analysis have been undertaken (Oberlack et al., 2015, Schoneveld 2014, Schoneveld 2017, Dell'Angelo et al. (2017). However, a more empirical understanding of the various changes and impacts at various levels is necessary for reflecting on visions for the planetary land system.

The objective of the session is to discuss recent research results on sustainability impacts of Large-Scale Agricultural Investments at household and regional (sub-national) level in the global South. Priority is given to presentations of results going beyond individual cases studies by using different approaches such as comparative case studies, studies looking at regional/spatial or temporal changes. Other innovative approaches to shed further light on the dynamics and impacts generated by such investments can also be proposed.

Presentations

Full talk
ID: 911 / 112RA: 1
112R Sustainability impacts of large scale agricultural investments
Keywords: Food security, large-scale agricultural investment, dietary diversity, coping strategies, Madagascar

The impact of large-scale agricultural investments on household food security in two areas of Madagascar

Wegayehu Fitawek[1], Sheryl Hendriks[1,2], Aurélien Reys[3], Filippo Fossi[1]
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Large-scale agricultural investments in developing countries have escalated over the past decade. While much is written about the potential negative effects of these acquisitions on local communities, there is a paucity of evidence of these impacts. This paper explores the impact of large-scale agribusinesses on household food security in two locations in Madagascar: one is plantation area or Location A and the other one is contract farming area or Location B in this paper... The sample of 601 households was classified into households (i) in which at least one member was employed or (ii) contracted to the agribusiness, (iii) households in the same area that were neither employees nor contractors (non-engaged) and (iv) counterfactual households from another community. The result of this paper show that dietary quality, food security and resilience were higher among employed households. Contract households were generally more food insecure than the counterfactual and non-engaged households. Living in the zone of influence did not seem to have major negative effects on the food security of non-engaged households. However, female-headed households seemed disadvantaged in terms of access to employment and contracting opportunities. Employment seemed to improved food security. However, unless attention is paid to the access of women to employment and contracting opportunities, inequality may be exacerbated. Governments and the agribusinesses should consider taking steps to ensure equitable access to employment and contracting for females.

Full talk
ID: 912 / 112RA: 2
112R Sustainability impacts of large scale agricultural investments
Keywords: Africa, Large-scale Agriculture investments, rural labor markets, business models, poverty reduction.

Nuancing the labor market effects of large-scale land acquisitions in SSA : Insights for improved policy frameworks

Sara Mercandalli[2], Perrine Burnod[2], Aurélien Reys[2], Ward Anseeuw[1,2], Markus Giger[3]
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What are the impacts of large-scale agricultural investments with regards rural labor market dynamics considering both supply and demand sides?

This paper compares the labour market implications of large scale farming enterprises in terms of both direct job creation and workers profiles in Kenya, Mozambique and

Madagascar. Using a common methodology, a total of 1,650 households were randomly selected and interviewed in impacted areas and in counterfactual areas. Labour Impacts in terms of i) quantity and quality of jobs created and ii) workers and households demo-economic profiles are analysed according to the business models of the enterprises, based, inter alia, on the crops produced and its intensity of labor requirements.

Results at both territorial level and between LSAI show that i) On the supply side overall gross LAIs' job creation in the 3 sites is significant at local level, although with strong differences according to business model. However, LAI job creation is lower than family farming labor requirement when calculated per cultivated hectares, meaning that LAI net employment creation strongly depends on both BM and previous land use by smallholders ; ii) The quality and attractiveness of jobs depends again on regional and business model features. iii) On the demand side, despite existing LAI related decent employment supporting households livelihoods, widespread precarious jobs often benefit the most vulnerable segments of the population: poor households, migrants, youth and / or women. This can either be seen as a benefit in terms of poverty reduction or critically considered as the direct result of the absence of alternatives for the most vulnerable. The comprehensive approach used, integrating both labour supply and demand dimensions, shows nuanced and context specific results. It provides insights to inform decision-makers on the models of agriculture to be promoted in different settings, to address SSA employment challenge.

Full talk
ID: 913 / **112RA: 3**
112R Sustainability impacts of large scale agricultural investments
Keywords: large scale land acquisitions, Madagascar, Kenya

How and why large-scale agricultural investments induce diverse trajectories of regional development in Kenya, Madagascar and Mozambique

Markus Giger[1], Christoph Oberlack[1,2], Ward Anseeuw[3,4], Camilla Adelle[3,5], Magalie Bourblanc[3], Boniface Kiteme[10], Perrine Burnod[3,6], Sandra Eckert[1], Eve Fouilleux[3,7,8], Sheryl Hendriks[9], Sara Mercandalli[3], Aurélien Reys[3], Maya da Silva[11], Michael Van Der Laan[11], Julie Zähringer[1], Peter Messerli[1,2]

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Changes to the global agro-food-energy system (e.g. changing consumption patterns in the North (SNF, 2012), Europe's Climate and biofuel policies, etc.) over the past few years have led to a renewed interest in agriculture and a rush to acquire land (Cotula, 2012; Anseeuw et al, 2013). The impacts of this rush on sustainability are not always evident as its assessments focus on the short-term and generally remain at a case study level, without considering the broader agrarian and socio-economic transformations it entails (Borras et al. 2012).

If a consensus emerges regarding the necessity of additional investment into agriculture (FAO, 2010), it is less evident whether large-scale agricultural investments (LAI) are a vector for broader agrarian and socio-economic transformations in a sustainable manner (Borras et al. 2012, Deininger and Byerlee 2011; Collier and Dercon 2014). Despite a growing literature (World Bank, 2010; White et al., 2012, Cotula 2014 etc.), most assessments of LAI impacts tend to remain local, in the form of specific case-studies, and are often short term without broader contextualization (Fairhead et al., 2012). Efforts to overcome these limitations through different types of meta-analyis have been undertaken (Oberlack et al., 2015, Schoneveld 2014, Schoneveld 2017, Dell'Angelo et al. (2017). However, a more empirical understanding of the diverse changes and impacts at various levels is necessary for reflecting on visions for the planetary land system.

Against this backdrop, this paper presents the results of a study aiming, on one hand, at assessing the changes and impacts of LAIs at various (individual, household, regional) levels within target regions, and on the other hand, at a nuanced account of how and why LAIs subsequently induce diverse regional development trajectories in these regions. We focus on LAIs in Kenya, Madagascar and Mozambique. Specifically, this study provides a cross-national comparative analysis of business models, land-use changes, governance dynamics of LAIs and their socio-economic, food security, and environmental impacts in Kenya, Madagascar and Mozambique. It brings together the individual results on these aspects, which were generated in the Afgroland project (www.afgroland.net). The following research question guides this analysis: How do contextual and institutional nuances of large-scale agricultural investments impact on land-use changes, the organization of production and investment processes, socio-economic outcomes, food security, and the environment in LAI target regions in Kenya, Madagascar and Mozambique?

Methodologically, this study utilizes a set-theoretic methodology for a case-based comparative analysis. It responds to calls for the use of robust empirical methodologies to provide reliable evidence on the impacts of LAIs and to expand the use of comparative methods to attribute LAI impacts to causal factors. Data were collected in six study areas in the three countries by means of household surveys with more than 1500 households, more than 200 key-informant and in-depth interviews with business managers, policymakers, households, development agencies, and NGOs; remotely sensed data between 2016 and 2018, and complemented with document analysis. Data analysis involved mixed qualitative and quantitative techniques.

A first set of tentative results, more conceptual in nature, show that LAIs induce regional development trajectories with sustainability impact patterns that can be characterized as conflictual sustainability trade-offs; employment vs. land access and environment trade-offs; widespread hostility; or moderate impacts. The set-theoretic analysis shows that the operational farm size, labour intensity, experience in local agriculture or domestic origin of investors, and prior land uses have the most significant impact on land-use changes, evolution of business models and adaptation of governance systems:. These transformation patterns are described in detail in the paper.

A second set of results shows how the same international drivers can have divergent impacts, with local-level outcomes which can differ significantly in terms of land use change, ecological impacts, food security, and livelihoods. These divergences are determined by national politics and policy frameworks, land tenure rights, business models, land and water resource endowments, and path-dependencies regarding investment and business practices. As such, in Kenya, and more particularly in the Nanyuki region characterised by long-standing LAIs, an agrarian normalisation process has established, based on labour intense production systems mainly in the flower and horticultural sectors. Better established labour rights, technology transfer and an agrarian sector that has developed over time leads presently to a relatively dynamic local economy with subsequent livelihood opportunities. In Mozambique, these regional dynamics are minimal however, albeit indirect through basic infrastructural and service development. On contrary, through land loss and increased land pressures, labour extensive crops and production models, and not well developed labour rights, major fractions of the local populations tend to be affected negatively. Lastly, in Madagascar, for the few investments that are still operational, they tend to function on an enclave model, with very little – if any – interactions and impacts on the regional economy and local populations.

The paper concludes by repositioning these results in the broader framework of interactions among sustainable development goals (SDGs), representing a critical, but mostly overlooked aspect in the debate on LAIs. In policy debates, LAIs are frequently justified with the argument that LAIs would create new flows of investments to capital-poor regions; create new employment; enhance agricultural productivity. In other words, this narratives relates LAIs positively to SDG10.B and SDG17.3 (investment flows), SDG8.5 (employment), and SDG2.3 (agricultural productivity), among others. By contrast, a recent review finds that LAIs can affect 14 of the 17 Sustainable Development Goals of the UN 2030 Agenda for Sustainable Development in adverse ways. The results of this study and the analyses in terms of diverging development trajectories induced by LAIs allows to assess how LAIs shapes the interaction between multiple SDGs. These interactions among SDGs in the framework of LAIs can take the forms of trade-offs, co-benefits, and co-damage.

Full talk
ID: 792 / **112RA: 4**
112R Sustainability impacts of large scale agricultural investments
Keywords: Dams, Landsat, Africa

Have African dams and irrigation schemes delivered the promised agricultural benefits?

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Reservoir-based irrigation, facilitated by damming rivers, is a key tool used by national governments and international development agencies for expanding agriculture, improving food security, and reducing rural poverty Currently, agricultural productivity gaps are highest in Africa and dam construction is increasingly used to rectify this. However, the efficacy of existing dams, both globally and in Africa, has been questioned. Between 1950 and 2005, nearly one thousand dams were built in Africa, half of which explicitly intended to assist agriculture. There is a wide-spread perception and anecdotal evidence to suggest these developments have failed to convey the promised benefits, with realised irrigated areas either smaller or less productive than planned. However, there is a lack of large-scale data to investigate these assumptions. In this study, we aim to quantify how actual dam-supported irrigation areas compare to the initial proposed irrigation command areas, and what factors contributed to any observed discrepancies. To do this, we combine historic records for planned irrigation areas, reported by international donors and national governments, with estimates of actual irrigated agricultural land areas derived from Landsat imagery and associated cropland data layer. Subsequently, the fraction of successfully delivered irrigated cropland was analysed against a range of environmental, socio-political, and technological factors using a series of Boosted Regression Trees. Our results indicate that, on a pan-African level, dams on average have delivered only 30% of the proposed irrigated cropland. However, there is wide variation in the performance of dam-and-canal irrigation schemes. In particular, irrigation scheme performance was negatively associated with weak governance and development size. These results contribute to ongoing debates around infrastructure and agricultural development in Africa by providing a robust